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EXAMINER	
BODDIE, WILLIAM	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/664,080	YOSHIHARA, KEIICHIRO	
	Examiner	Art Unit	
	WILLIAM L. BODDIE	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In an amendment dated February 19th, 2008 the Applicant amended claims 1, 11, 20 and added new claims 21-24. Claims 1-24 are currently pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 19th, 2008 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palalau et al. (US 6,373,472) in view of Stephan (US 5,748,185) and further in view of Rowe (US 6,559,833).

With respect to claim 1, Palalau discloses, an electronic equipment (fig. 1) comprising: a display device configured to display information (36 in fig. 2b) and including a display surface (clear from fig. 2b); a touch sensor arranged on at least part of the display surface (col. 3, lines 61-67); a guide portion (note the outer edges of the touch screen) configured to fringe the surface with a line configured by one of a concave portion and a convex portion as a whole, including a reference position (each function 36a-f in fig. 2b) on a surface of the touch sensor located between a vertex and a center of one of said concave portion and said convex portion (clear from fig. 2b); and

a controller (120 in fig. 12a) configured to control a user interface (col. 4, lines 3-8) in accordance with a touch screen location corresponding to a reference position.

Palalau does not expressly disclose, that the guide portion protrudes from a surface of the touch sensor, nor that the controller is configured to control an adjustment value in accordance with a direction of a slide operation along said guide portion from the reference position.

Stephan discloses, an electronic equipment (fig. 13) comprising: a display device configured to display information (laptop screen in fig. 13) and including a display surface (284 in fig. 13); a touch sensor (284, 286, 288 in fig. 13) arranged on at least part of the display surface (clear from fig. 13); a guide portion (tactile cues; col. 12, lines 35-43) configured to protrude from a surface of the touch sensor and to fringe the surface with a line (192, 194 in fig. 7); and

a controller (110 in fig. 3) configured to control an adjustment value (direction of movement and increment of movement) in accordance with a direction of a slide

operation along said guide portion from a reference position (fig. 4-5; also note col. 7, lines 38-66; which notes that the coordinates transmitted are relative to a reference position).

Palalau and Stephan are analogous art because they are both from the same field of endeavor namely visual cues to augment touch sensor devices.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the textured edges and sliding operations of Stephan with the curved edges taught by Palalau.

The motivation for doing so would have been to communicate to the user, which touch region they are located in, without requiring the user to look down (Stephan; col. 10, lines 14-20).

To summarize, Stephan teaches applying tactile cues along the sides of touch screen displays. Stephan does not go in-depth into the numerous shapes, sizes and types of tactile cues that can be provided on the sides of the touch screen display. Palalau teaches a curved edge touch screen. It would have been obvious to include the protruding tactile cues and sliding operation that Stephan discloses in the curved touchscreen embodiment of Palalau.

Neither Stephan nor Palalau expressly disclose wherein the reference position is fixed.

Rowe discloses, a touchpad (fig. 2) wherein a fixed reference position (25 in fig. 2) is located between a middle of the bottom of the touchpad and a center of the bottom

of the touchpad and a controller is configured to control an adjustment value in accordance with a direction of a slide operation from the fixed reference position (fig. 3);

wherein said adjustment value is controlled after said fixed reference position is depressed by a touch operation (122 in fig. 3).

Rowe, Palalau and Stephan are analogous art because they are both from the same field of endeavor namely touch sensor device orientation and layout.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the relative reference position of Stephan and Palalau with the fixed reference position of Rowe.

The motivation for doing so would have been to provide a more intuitive interface for the user as well as to provide for fine movements (Rowe; col. 1, lines 30-37).

With respect to claim 4, Stephan, Rowe and Palalau disclose, the electronic equipment as claimed in claim 1 (see above).

Palalau, when combined with Stephan and Rowe, further discloses, a notification unit (22 in fig. 1) configured to provide a notification that the reference position is depressed (Palalau teaches that depression of a reference position (function group in 28) alters the displayed graphics on screen 22, thereby providing notification to the user that the position has been depressed. Col. 4, lines 45-52, for example).

6. Claims 1-3, 6-7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan (US 5,748,185) in view of Yamaguchi et al. (US 7,143,355) and further in view of Rowe (US 6,559,833).

With respect to claim 1, Stephan discloses, an electronic equipment (fig. 13) comprising: a display device configured to display information (laptop screen in fig. 13) and including a display surface (284 in fig. 13); a touch sensor (284, 286, 288 in fig. 13) arranged on at least part of the display surface (clear from fig. 13); a guide portion (tactile cues; col. 12, lines 35-43) configured to protrude from a surface of the touch sensor and to fringe the surface with a line (192, 194 in fig. 7), including a reference position on a surface of the touch sensor located between a vertex and a center of said line (col. 7, lines 38-66; Stephan discloses transmitting x and y coordinates that are indicative of the relative movement of the contact point (col. 8, lines 19-22)); and

a controller (110 in fig. 3) configured to control an adjustment value (direction of movement and increment of movement) in accordance with a direction of a slide operation along said guide portion from the reference position (fig. 4-5; also note col. 7, lines 38-66; which notes that the coordinates transmitted are relative to a reference position).

Stephan does not expressly disclose that the guide portion is configured by one of a concave portion and a convex portion as a whole.

Yamaguchi discloses a guide portion (rounded edge of 6 in fig. 22) configured to protrude from a surface of a touch sensor (6 in fig. 22) and to fringe the surface with a line configured by a concave portion as a whole (clear from fig. 22; also note col. 12, lines 48-51), including a reference position on a surface of the touch sensor located between a vertex and a center of one of said concave portion (each switching segment is seen as a reference position).

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the textured edges of Stephan with the curved edges taught by Yamaguchi.

The motivation for doing so would have been due to aesthetic design choices, as well as to offer the user a less abrasive form of tactile feedback.

To summarize, Stephan teaches applying tactile cues along the sides of touch *screen* displays. Stephan does not go in-depth into the numerous shapes, sizes and types of tactile cues that can be provided on the sides of the touch screen display. Yamaguchi teaches a curved edge on a touch pad.. It would have been obvious to replace the jagged tactile cues that Stephan discloses with the more structured and smoother curved edge of Yamaguchi.

Neither Stephan nor Yamaguchi expressly disclose wherein the reference position is fixed.

Rowe discloses, a touchpad (fig. 2) wherein a fixed reference position (25 in fig. 2) is located between a middle of the bottom of the touchpad and a center of the bottom of the touchpad and a controller is configured to control an adjustment value in accordance with a direction of a slide operation from the fixed reference position (fig. 3);

wherein said adjustment value is controlled after said fixed reference position is depressed by a touch operation (122 in fig. 3).

Rowe, Yamaguchi and Stephan are analogous art because they are both from the same field of endeavor namely touch sensor device orientation and layout.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the relative reference position of Stephan and Yamaguchi with the fixed reference position of Rowe.

The motivation for doing so would have been to provide a more intuitive interface for the user as well as to provide for fine movements (Rowe; col. 1, lines 30-37).

With respect to claim 2, Stephan, Rowe and Yamaguchi disclose, the electronic equipment in claim 1 (see above).

Rowe further discloses, wherein the controller (5 in fig. 1) sets the adjustment value to a predetermined reference value when the fixed reference position is depressed (should be clear from col. 4, lines 50-55; wherein it is disclosed that the rate of scrolling (adjustment value) is determined based on the distance from the reference position).

With respect to claim 3, Stephan, Yamaguchi and Rowe disclose, the electronic equipment as claimed in claim 2 (see above).

Rowe further discloses, where the controller changes the adjustment value (rate of scrolling) from a reference value when the slide operation is performed after the fixed reference position is depressed (again this limitation should be clear from col. 4, lines 50-55; see above discussion in claim 2 rejection).

With respect to claim 6, Stephan, Rowe and Yamaguchi disclose, the electronic equipment as claimed in claim 1 (see above).

Stephan further discloses, wherein said touch sensor includes one of a display function (pan and scroll) and a switch function (note the discussion of a menu bar or a tool bar; col. 12, lines 50-53).

With respect to claim 7, Stephan, Rowe and Yamaguchi disclose, the electronic equipment as claimed in claim 1 (see above).

Stephan further discloses, wherein said touch sensor (288 and 286 in fig. 13) arranged on said at least a part of said display surface (284 in fig. 13) is configured to be proximate to said guide portion (note the relationship between the guide portion, 192, and the touch sensor in fig. 7; as discussed by Stephan this relationship will be carried over to the touchscreen embodiment; col. 12, lines 40-42).

With respect to claim 20, claim 20 is seen as containing the same limitations as those recited in claim 1. Therefore claim 20 is rejected on the same merits shown above in the rejection of claim 1.

7. Claim 5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan (US 5,748,185) in view of Yamaguchi et al. (US 7,143,355) and Rowe (US 6,559,833) and further in view of Vanderheiden (US 6,049,328).

With respect to claim 5, Stephan, Rowe and Yamaguchi disclose, the electronic equipment of claim 1 (see above).

Stephan further discloses, that the functions to which the user can control may be varied based on the particular application program (col. 12, lines 53-55).

However, neither Stephan, Rowe nor Yamaguchi expressly disclose, controlling an adjustment value (On or Off) of an output level of an acoustic signal (col. 6, lines 29-45).

Vanderheiden discloses, a touch screen device having a concave and convex guide portion (200 in fig. 2), wherein the sliding motion controls an adjustment value (On or Off) of an output level of an acoustic signal (col. 6, lines 29-45).

Vanderheiden, Rowe, Yamaguchi and Stephan are analogous art because they are all from the same field of endeavor namely tactile and visual cues to augment touch sensor devices.

It would have been obvious to one of ordinary skill in the art to enable the touch screen device of Rowe, Yamaguchi and Stephan to control an adjustment value of an acoustic signal as taught by Vanderheiden.

The motivation for doing so would have been to make the device more user-friendly for use by people with disabilities, i.e. the visually impaired (Vanderheiden; col. 1, lines 8-11).

With respect to claim 8, Stephan, Rowe and Yamaguchi disclose, the electronic equipment as claimed in claim 1 (see above).

Rowe further discloses, visual cues (25 in fig. 2) wherein said visual cues correspond to said fixed reference position (col. 3, lines 15-20)

Neither Stephan, Rowe nor Yamaguchi expressly disclose that the graphical images are displayed on a display device that correspond to said fixed reference position.

Vanderheiden discloses, a graphical image that corresponds to a fixed reference position (center icon 46" in fig. 2; opposite the indent).

Vanderheiden, Stephan, Rowe and Yamaguchi are analogous art because they are from the same field of endeavor namely, touch screen functionality and interfaces.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the graphical icon of Vanderheiden in the scroll bar graphics of Stephan, Rowe and Yamaguchi.

The motivation for doing so would have well known advantages including allowing the user to quickly orient themselves when viewing the touch screen.

With respect to claim 9, Stephan, Vanderheiden, Rowe and Yamaguchi disclose the electronic equipment as claimed in claim 8 (see above).

Vanderheiden further discloses, wherein the graphical image represents an initial value in a parameter adjustment range (col. 11, lines 58-63).

With respect to claim 10, Stephan, Yamaguchi, Rowe and Vanderheiden disclose, the electronic equipment as claimed in claim 9 (see above).

Stephan as modified by Yamaguchi, Rowe and Vanderheiden further discloses, second and third graphical images (Stephan; up/down arrows in fig. 11) displayed on said display device in said surface of said touch sensor on either side of said graphical image (Stephan; outlined box in fig. 11, for example), wherein said second and third graphical images represent one of a value to be increased (up arrow) and a value to be decreased (down arrow) from said initial value in a parameter adjustment range.

8. Claims 11 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan (US 5,748,185) in view of Palalau et al. (US 6,373,472) and further in view of Rowe (US 6,559,833).

With respect to claim 11, Stephan discloses, a method of controlling electronic equipment (figs. 4-5), a touch sensor (284,286,288 in fig. 13) arranged on at least a part of a display surface (laptop screen in fig. 13), a guide portion (192 in fig. 7; col. 12, lines 40-41) configured to protrude from a surface of said touch sensor and to fringe said surface with a line, including a reference position on a surface of the touch sensor located between a vertex and said line (col. 7, lines 38-66; Stephan discloses transmitting x and y coordinates that are indicative of the relative movement of the contact point (col. 8, lines 19-22)), said method comprising:

guiding a finger along said guide portion (col. 3, lines 57-64); and

receiving a contact input on said surface of said touch sensor based on guiding said finger along said guide portion (col. 8, lines 10-19; for example).

Stephan does not expressly disclose that the guide portion is configured by one of a concave portion and a convex portion as a whole, including locating a reference position between a vertex and a center of one of said concave and said convex portion, said method comprising:

guiding a finger along said guide portion to said reference position; and,

receiving a contact input on said surface of said touch sensor adjacent to said reference position based on guiding said finger along said guide portion to said reference position.

Palalau discloses a guide portion (note the outer edges of the touch screen) configured to fringe the surface with a line configured by one of a concave portion and a convex portion as a whole (clear from fig. 2b), including a reference position (each function 36a-f in fig. 2b) on a surface of the touch sensor located between a vertex and a center of one of said concave portion and said convex portion (clear from fig. 2b), furthermore;

guiding a finger along said guide portion to said reference position (col. 3, lines 59-64) and,

receiving a contact input on said surface of said touch sensor adjacent to said reference position based on guiding said finger along said guide portion to said reference position (col. 3, line 64 – col. 4, line 8).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the curved edges and reference positioning, taught by Palalau, in the touch screen device of Stephan.

The motivation for doing so would have been aesthetic design choices, as well as to offer the user a less abrasive form of tactile feedback.

To summarize, Stephan teaches applying tactile cues along the sides of touch screen displays. Stephan does not go in-depth into the numerous shapes, sizes and types of tactile cues that can be provided on the sides of the touch screen display. Palalau teaches a curved edge touch screen. It would have been obvious to include the curved guide edges and reference positioning that Palalau discloses in the protruding guide touchscreen embodiment of Stephan.

Neither Stephan nor Palalau expressly disclose wherein the reference position is fixed.

Rowe discloses, a touchpad (fig. 2) wherein a fixed reference position (25 in fig. 2) is located between a middle of the bottom of the touchpad and a center of the bottom of the touchpad and a controller is configured to control an adjustment value in accordance with a direction of a slide operation from the fixed reference position (fig. 3);

wherein said adjustment value is controlled after said fixed reference position is depressed by a touch operation (122 in fig. 3).

Rowe, Palalau and Stephan are analogous art because they are both from the same field of endeavor namely touch sensor device orientation and layout.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the relative reference position of Stephan and Palalau with the fixed reference position of Rowe.

The motivation for doing so would have been to provide a more intuitive interface for the user as well as to provide for fine movements (Rowe; col. 1, lines 30-37).

With respect to claim 14, Stephan, Rowe and Palalau disclose, the method of controlling electronic equipment as claimed in claim 11 (see above).

Stephan, as modified by Rowe and Palalau, discloses, receiving sliding contact input on said surface of said touch sensor adjacent to said fixed reference position (Palalau; col. 3, line 64 – col. 4, line 8) and,

inputting said adjustment value to a controller based on receiving said sliding contact input (Palalau; col. 6, lines 21-24).

With respect to claims 15 and 16, Stephan, Rowe and Palalau disclose, the method of controlling electronic equipment as claimed in claim 14 (see above).

Stephen further discloses, wherein receiving sliding contact input on said surface of said touch sensor in a first direction inputs a positive adjustment value to said controller, in a second direction inputs a negative adjustment value (130 in fig. 4, 140, 142 in fig. 5; col. 7, lines 39-59).

9. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan (US 5,748,185) in view of Palalau et al. (US 6,373,472) and Rowe (US 6,559,833) and further in view of Vanderheiden (US 6,384,743).

With respect to claim 12, Stephan, Rowe and Palalau disclose, the electronic equipment as claimed in claim 11 (see above).

Stephan further discloses, visual cues (254, 256 in fig. 11) to the user as to the delineations in the regions (col. 12, lines 40-42).

Palalau further discloses, a graphical image (audio, climate etc. in fig. 2b) displayed on said display device in said surface of said touch sensor (36 in fig. 2b), wherein said graphical image corresponds to said reference position (note the above rejection of claim 11, wherein the reference position is seen as each function in the display).

Neither Stephan, Rowe nor Palalau expressly disclose that the graphical image represents an initial value in a parameter adjustment range or that it corresponds to said fixed reference position.

Vanderheiden discloses, a graphical image that represents an initial value in a parameter adjustment range and corresponds to a fixed reference position (center icon 46" in fig. 2; opposite the indent).

Vanderheiden, Stephan, Rowe and Palalau are analogous art because they are from the same field of endeavor namely, touch screen functionality and interfaces.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the graphical icon of Vanderheiden in the scroll bar graphics of Stephan, Rowe and Palalau.

The motivation for doing so would have well known advantages including to allow the user to quickly orient themselves when viewing the touch screen.

With respect to claim 13, Stephan, Palalau, Rowe and Vanderheiden disclose, the electronic equipment as claimed in claim 12 (see above).

Stephan as modified by Palalau, Rowe and Vanderheiden further discloses, second and third graphical images (Stephan; up/down arrows in fig. 11) displayed on said display device in said surface of said touch sensor on either side of said graphical image (Stephan; outlined box in fig. 11, for example), wherein said second and third graphical images represent one of a value to be increased (up arrow) and a value to be decreased (down arrow) from said initial value in a parameter adjustment range.

10. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan (US 5,748,185) in view of Palalau et al. (US 6,373,472) and Rowe (US 6,559,833) and further in view of Serravalle, Jr. (US 4,631,525).

With respect to claim 17, Stephan, Rowe and Palalau disclose, the method of controlling electronic equipment as claimed in claim 11 (see above).

Neither Stephan, Rowe nor Palalau expressly disclose, storing a present value of an adjustment parameter in response to receiving said contact input on said surface of said touch sensor adjacent to said reference position.

Serravalle, Jr., discloses, storing in a register (98 in fig. 4) the present value of an adjustment parameter in response to receiving a contact input on a surface of a touch sensor (40, 60 in fig. 4) adjacent to a reference position (0 label for example).

Serravalle, Jr., Stephan, Rowe and Palalau are analogous art because they are both from the same field of endeavor namely touch sensor use and implementation.

At the time of the invention it would have been obvious to one of ordinary skill in the art to store the present value of Stephan, Rowe and Palalau as taught by Serravalle, Jr.

The motivation for doing so would have been to allow the comparison of two different locations of the user's touch (Serravalle, Jr.; col. 11, line 60 – col. 12, line 11).

To further explain, the combination of Serravalle, Jr. and Rowe would result in a teaching of storing a present value an adjustment parameter in response to receiving a contact input on the surface of a touch adjacent to the *fixed* reference position.

With respect to claim 18, Stephan, Palalau, Rowe and Serravalle, Jr. disclose, the method of controlling electronic equipment as claimed in claim 17 (see above).

Stephan further discloses, determining whether said slide operation is performed on said surface of said touch sensor (123, 125, 127 in fig. 4).

With respect to claim 19, Stephan, Palalau, Rowe and Serravalle, Jr. disclose, the method of controlling electronic equipment as claimed in claim 18 (see above).

Serravalle, Jr. further discloses, adding said adjustment value to said stored present value of an adjustment parameter in response to determining whether said slide operation is performed (col. 12, lines 28-37); and

controlling an output parameter based on adding said adjustment value to said stored present value of an adjustment parameter (col. 2, lines 22-30).

11. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan (US 5,748,185) in view of Yamaguchi et al. (US 7,143,355) and further in view of Rowe (US 6,559,833) and Takahashi (US 4,954,967).

With respect to claim 21, Stephan, Yamaguchi and Rowe disclose, the electronic equipment according to claim 1 (see above).

Neither Stephan, Yamaguchi nor Rowe expressly disclose, a storage unit which stores a current adjustment value when the fixed reference position is depressed.

Takahashi discloses a storage unit (21 in fig. 4) which stores a current adjustment value when a fixed reference position is depressed (102 in fig. 7).

Takahashi, Stephan, Rowe and Yamaguchi are analogous art because they are both from the same field of endeavor namely touch sensor use and implementation.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the storage unit of Takahashi in the device of Stephan, Rowe and Yamaguchi for the well-known benefit of comparison of the current adjustment value with future movements. Thereby determination of movement is achieved.

With respect to claim 22, Stephan, Yamaguchi, Takahashi and Rowe disclose, the electronic equipment according to claim 21 (see above).

Takahashi further discloses, a timer (102 in fig. 7) which counts a predetermined time period from a time when a reference position is depressed (104 in fig. 7),

wherein the controller controls the adjustment value in accordance with the slide operation starting during the predetermined time period (106-114 in fig. 7).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the timer of Takahashi in the device of Stephan, Rowe and Yamaguchi to allow better determination in the direction of movement (Takahashi; col. 3, lines 37-42).

With respect to claim 23, Stephan, Yamaguchi, Takahashi and Rowe disclose, the electronic equipment according to claim 22 (see above).

Stephan, when combined with Yamaguchi, Takahashi and Rowe, further discloses, when the timer finishes counting of the predetermined time period, the controller sets the adjustment value to the current adjustment value stored in the storage unit if no slide operation is performed during the predetermined time period (No path of 104 in fig. 7; col. 3, lines 25-37).

With respect to claim 24, Stephan, Yamaguchi, Takahashi and Rowe disclose, the electronic equipment according to claim 22 (see above).

Stephan, when combined with Yamaguchi, Takahashi and Rowe, further discloses, when the timer finishes counting of the predetermined time period, the controller sets the adjustment value to a predetermined reference value if no slide

operation is performed during the predetermined time period (No path of 104 in fig. 7; col. 3, lines 25-37).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM L. BODDIE whose telephone number is (571)272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/William L Boddie/
Examiner, Art Unit 2629
6/5/08

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629